NAME OF THE COURSE	Mechanics of Deformable Bodies					
Code	PMP20B	Year of study	1 and 2			
Course teacher	Ante Bilušić, PhD, Professor	Credits (ECTS)	5,0			
Associate teachers		Type of instruction (number of hours)	**L**	**S**	**E**	**F**
			45			
Status of the course	Elective	Percentage of application of e-learning				

COURSE DESCRIPTION	
Course objectives	To introduce students to - notion of tensor - tensor algebra - tensor analysis - physical interpretation of deformation gradient - application of tensor calculus to fluid mechanics and bas - thermodynamic description of solutions and chemical reactions - transport processes
Course enrolment requirements and entry competences required for the course	Vector algebra and analysis
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	1. Define an order of tensor. 2. Define basic algebraic properties of 2nd order tensor. 3. Connect elements of deformation gradient with elastic properties of material. 4. Apply tensor calculus to fluid mechanics.
Course content broken down in detail by weekly class schedule (syllabus)	1. Vector Algebra 2. Index Notation 3. Second-Order Tensors 4. Fourth-Order Tensors 5. Tensor Calculus 6. Integral Theorems 7. Continuum Mass and Force Concepts 8. Basic Stress Concepts 9. Kinematics 10. Motions 11. Balance Laws 12. Localized Lagrangian Form of Balance Laws 13. Isothermal Fluid Mechanics 14. Elastic Fluids 15. Newtonian Fluids
Format of instruction	☒ lectures ☒ seminars and workshops ☐ exercises ☐ on line in entirety ☒ partial e-learning ☐ field work ☒ independent assignments ☐ multimedia ☐ laboratory ☐ work with mentor ☐ homework assignments
Student responsibilities	

Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*	Name	Ects	Name	Ects	Name	Ects
	Class attendance	2	Research		Experimental work	
	Oral exam		Report		Homework assignments	
	Seminar essay	3	Essay			
	Tests		Practical training			

	Written exam		Project			

Grading and evaluating student work in class and at the final exam	

	Title	Number of copies in the library	Availability via other media
Required literature (available in the library and via other media)	[1] O. GONZALEZ AND A. M. STUARTA First Course in Continuum Mechanics	2	

Optional literature (at the time of submission of study programme proposal)	
Quality assurance methods that ensure the acquisition of exit competences	Statistics of students' results and students' evaluation via anonymous questionnaires at the end of the course. The survey is conducted according to the rules of the University of Split.
Other (as the proposer wishes to add)	

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